Special Issue

Dependence Modeling with Copulas and Their Applications

Message from the Guest Editors

In probability and statistics, a copula is a multivariate cumulative distribution function for which the marginal probability distribution of each variable is uniform on the interval [0, 1]. Copulas are used to describe or model thedependence between random variables. They were introduced by Abe Sklar in 1959, and the word comes from the Latin for "link" or "tie", since they relate a multivariate distribution function to its one-dimensional marginals. Copulas have been used widely in quantitative finance to model and minimize tail risk and portfolio-optimization applications. Copulas are popular in high-dimensional statistical applications as they allow one to easily model and estimate the distribution of random vectors by estimating marginals and copulas separately. There are many parametric copula families available, which usually have parameters that control the strength of dependence. This Special Issue aims to collate original research articles as well as comprehensive reviews addressing the theories and applications of copulas in quantitative finance, reliability, hydrology, computer science, etc.

Guest Editors

Prof. Dr. Manuel Úbeda-Flores
Department of Mathematics, University of Almería, 04120 Almería, Spain

Prof. Dr. Enrique de Amo
Department of Mathematics, University of Almería, 04120 Almería, Spain

Deadline for manuscript submissions

closed (30 June 2024)

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Mathematics

About the Journal

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

Editor-in-Chief

Prof. Dr. Francisco Chiclana
School of Computer Science and Informatics, De Montfort University, The Gateway, Leicester LE1 9BH, UK

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